



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/810,943	03/26/2004	Sanmukh Makan Patel	TI-37021	9895

23494 7590 12/16/2005

TEXAS INSTRUMENTS INCORPORATED
P O BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER

VU, DAVID HUNG

ART UNIT	PAPER NUMBER
----------	--------------

2828

DATE MAILED: 12/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/810,943

Applicant(s)

PATEL ET AL.

Examiner

David Vu

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-33 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 17-33 is/are allowed.
- 6) ☒ Claim(s) 1 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 13-16 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/26/2004</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Objections

2. Claims 1, 20 and 24 are objected to because of the following informalities:

Claim 1, line 6, "switching" should be ---system---.

Claim 20, should "each cycle" properly be ---in each cycle--- or ---during each cycle---?

Claim 24, line 4, "is a" (first occurrence) has been deleted.

3. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Van de Ven, US Pat No 5,812,105.

Van de Ven discloses the claimed invention including a high-side system 37 operative to source current relative to at least two associated outputs; a low-side system 41-43 operative to sink current relative to a plurality of associated inputs; and a control system including demultiplexer 36 and input buffer 35 that controls the high-side system and the low-side switching according to a multiplexing scheme that is operative to provide current to selected load devices (light emitting elements in display module 20) of the plurality of load devices connected between the associated outputs and the associated inputs (figures 3 and 5, column 8, lines 64+, column 9, lines 1-62) .

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van de Ven in view of Gary et al (hereinafter Gary), US Pat No 4,347,540.

Van de Ven as discussed from the above, essentially discloses the claimed invention but fails to explicitly disclose a fault monitoring system operative to detect a protection condition associated with at least one of the low-side system, the high-side system and at least some of the plurality of load devices and a protection in response to the fault monitoring system detecting a protection condition. Gary discloses a fault monitoring and protection system (abstract, figures 1, 2-3, columns 9-10, 14). It would

have been obvious to one having ordinary skill in the art at the time of applicant's claimed invention was made to have provided the fault monitor and protecting system as taught by Gary; thus, protection against damage to the load would have been realized.

8. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Van de Ven.

Van de Ven as discussed from the above, essentially discloses the claimed invention but fails to explicitly disclose an integrated circuit (IC) comprising the claimed system. However, integrated circuit is very well known in the art. It would have been obvious to one having ordinary skill in the art at the time of applicant's claimed invention was made to have employed the system in the form of integrated circuit; thus, compactness and mass production would have been realized.

Allowable Subject Matter

9. Claims 2-9, 13-16 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. Claims 17-33 are allowed.

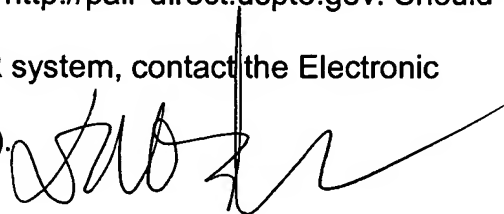
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Vu whose telephone number is (571) 272-1831. The examiner can normally be reached on M-F 8am-430pm.

Art Unit: 2828

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read 'David Vu', is written over the end of the paragraph.

David Vu
Primary Examiner
Art Unit 2828

dv